

**General Motors Engine Oil Aeration Test**

**For dexos®**

**Form 1**

Version

Conducted For

	V = Valid
	I = Invalid
	N = Results cannot be interpreted as representative of oil performance (Non-reference oil) and shall not be used for multiple test acceptance

<b>Test Number</b>			
Stand	Engine	Engine Runs	Lab Runs
Test Number			
Oil Code			
Formulation/Stand Code			
SAE Viscosity Grade		Reference Oil Code: <sup>A</sup>	
Alternate Codes			
Date Started		Time Started	
Date Completed		Time Completed	
Test Length		Total Downtime	

*A: Reference Oil tests only*

In my opinion this test \_\_\_\_\_ been conducted in a valid manner in accordance with test procedure GMAER and appropriate amendments. The remarks included in the report describe the anomalies associated with this test.

Submitted By: \_\_\_\_\_

Testing Laboratory

Signature

Typed Name

Title

**General Motors dexos® Engine Oil Aeration Test**  
**Form 2**  
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**General Motors dexos® Engine Oil Aeration Test  
Form 3**

**Test Summary**

Test Number	
Formulation Stand Code	

Test Info			
Engine Number		Engine Hours @ SOT	
Engine Run #		Labs Runs	
Oil Weight SOT (g)		Fuel Batch ID	
Oil Weight EOT (g)			
Total Oil Consumption (g)			

Test Results: Extracted Aeration Readings from Aeration vs. Time Curve at 100 kPaA	
	Test Oil Result
28-29 Hour Average Aeration (%)	
	Other Information
0.5 - 1 Hour Average Aeration (%)	
4-5 Hour Average Aeration (%)	
19-20 Hour Average Aeration (%)	
Maximum Micromotion Aeration (%)	
Oil Density at 160 kPaA by Micromotion, g/mL	

Post Test Pressure Sweep	
Pressure, kPaA	Average Aeration % (last 5 minutes)
84	
140	
160	

Baseline Oil Test Information			
Baseline Oil Code		Test Length	
Date Started		Time Started	
Date Completed		Time Completed	
Baseline Oil Test Results for Specification Assessment: Aeration vs. Time Curve at 100 kPaA			
		Baseline Oil Result	
28-29 Hour Average Aeration (%)			
		Other Information	
0.5 – 1 Hour Average Aeration (%)			
4-5 Hour Average Aeration (%)			
19-20 Hour Average Aeration (%)			
Maximum Micromotion Aeration (%)			
Oil Density at 160 kPaA by Micromotion, g/mL			

**General Motors dexos® Engine Oil Aeration Test  
Form 4  
Operational Summary – Test Oil**

Test Number	
Formulation Stand Code	

		<b>Operational Summary</b>									
		<b>Parameter</b>	<b>Units</b>	<b>Target</b>	<b>Average</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>	<b>QI</b>	<b>Samples</b>	<b>BQD</b>
<b>Controlled Parameters</b>		Speed	r/min	3000							
		Torque	Nm	150							
		Coolant Out Temp	°C	100							
		Oil Gallery Temp	°C	110							
		Sample Oil Flow	L/min	1.5							
		Sample Oil Pressure	kPaA	100							
		Sample Oil Temperature	°C	115							
		Crankcase Pressure	kPaA	100							
<b>Uncontrolled Parameters</b>		Power	kW	Record							
		Coolant In Temp	°C	Record							
		Intake Air Temp, Engine	°C	Record							
		Oil Sump Temp	°C	Record							
		Fuel Temp at Rail	°C	Record							
		Ambient Temp	°C	Record							
		Right Side Exhaust Temp	°C	Record							
		Left Side Exhaust Temp	°C	Record							
		Intake Manifold Air Pressure	kPaA	Record							
		Oil Gallery Pressure	kPaG	Record							
		Fuel Pressure	kPaG	Record							
		Pressure Ambient	kPaA	Record							
		Exhaust back Pressure	kPaG	Record							
		Oil Temp In to Micromotion	°C	Record							
		Oil Temp Out of Micromotion	°C	Record							

**General Motors dexos® Engine Oil Aeration Test  
Form 5**

**Oil Analysis – Test Oil**

Test Number	
Formulation Stand Code	

<b>ICP (ppm)</b>		
<b>Element</b>	<b>New</b>	<b>30 Hrs</b>
Aluminum (Al)		
Copper (Cu)		
Iron (Fe)		
Silicon (Si)		

	<b>New</b>	<b>30 Hrs</b>
Viscosity at 100 °C (cSt)		

**General Motors dexos® Engine Oil Aeration Test  
Form 6**

**Aeration Plot – Test Oil**

Test Number	
Formulation Stand Code	

**General Motors dexos® Engine Oil Aeration Test  
Form 7**

**Downtime Summary – Test Oil**

Test Number	
Formulation Stand Code	

Number of Downtime Occurrences			
Test Hours	Date	Downtime	Reasons
			<b>Total Downtime (hours)</b>







**General Motors dexos® Engine Oil Aeration Test  
Form 10**

**Aeration Plot – Baseline Oil**

Baseline Oil Test Number	
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**General Motors dexos® Engine Oil Aeration Test  
Form 11**

**Downtime Summary – Baseline Oil**

Baseline Oil Test Number	
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Number of Downtime Occurrences			
Test Hours	Date	Downtime	Reasons
			<b>Total Downtime (hours)</b>

